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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

KRECK, JOHN J

ART UNIT	PAPER NUMBER
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3673

DATE MAILED: 11/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/818,117

Applicant(s)

CHOI, ET AL.

Examiner

John Kreck

Art Unit

3673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

The amendment dated 7/21/03 has been entered.

Claims 1-30 are pending.

Drawings

The drawings were received on 7/21/03. These drawings are approved.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-4 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by FR 2186955. See the attached translation.

The FR document (see figure 2) shows an oil storage and offtake system comprising a storage tank (3) attached to the seabed (at 6) and adapted to store hydrocarbons; at least one fluid channel (7,8); at least one offload line (16); and at least one hawser (24) as called for in claim 1.

The FR tank is adapted to store hydrocarbons (27) on top of water (28) as called for in claim 2.

The FR reference also shows the second end (8) of the fluid channel away from the seabed as called for in claim 3.

Art Unit: 3673

The FR reference also shows the substantially rigid lower portion (below 15) and the flexible portion (above 15) as called for in claim 4.

The FR document also shows the storage tank(3); offload line(16); and hawser (24) as called for in claim 30.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6,12-17, 19-22, 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Manning (U.S. Patent number 3,479,673) in view of Braud (U.S. Patent number 5,816,183) and Westling (U.S. Patent number 3,855,809).

Manning shows an oil storage and offtake system including a storage tank (12) attachable to the seabed and adapted to store hydrocarbons; at least one offload line (10) having a first end coupled to the tank proximal the top, and a second end adapted to be fluid coupled to a tanker and accessible from a water surface. Manning fails to show the hawser having an end connected to the tank at a location below the water surface and also fails to show the fluid channel.

Art Unit: 3673

Braud teaches a mooring and offtake system including a buoy below the surface and a hawser with a first end below the water surface. The Braud buoy and hawser is advantageous because it reduces the effect of weather on the mooring system.

Westling teaches a seabed oil storage tank which includes a fluid channel, for equalizing pressure as oil is introduced or removed from the tank. This is generally necessary for a rigid tank.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the Manning system to have a below surface mooring and offtake system (replacing everything above the buoy 19 with everything above buoy 2 shown by Braud), specifically including a hawser having an end connected at a location below the water surface, in order to minimize the effect of weather on the mooring system.

It would have been further obvious to one of ordinary skill in the art at the time of the invention to have included a fluid channel with the tank, as taught by Westling, and as called for in claim 1, for equalizing pressure as oil is introduced or removed from the tank.

The Westling reference teaches the tank adapted as called for in claim 2.

The Westling reference teaches the second end of the fluid channel as called for in claim 3.

The Manning reference teaches the rigid lower portion; the Braud reference teaches the flexible upper portion as called for in claim 4.

The Manning reference teaches a top tensioned riser as called for in claim 5.

Art Unit: 3673

The Manning reference teaches a buoyant device as called for in claim 6.

With regards to claim 12: Braud teaches the buoy below the depth affected by waves.

Further, with regards to claims 13 and 14; Braud clearly teaches the desirability of locating the buoyant device below a depth affected by waves, but fails to explicitly disclose a specific depth, or the depth below which can be affected by a specific storm magnitude.

Braud teaches the depth below which the buoyant device will be affected by waves; the specific storm magnitude as claimed would have been obvious to one of ordinary skill in the art at the time of the invention. See *In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955) (*Claims directed to a lumber package "of appreciable size and weight requiring handling by a lift truck" where held unpatentable over prior art lumber packages which could be lifted by hand because limitations relating to the size of the package were not sufficient to patentably distinguish over the prior art.*); *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976) (*"mere scaling up of a prior art process capable of being scaled up, if such were the case, would not establish patentability in a claim to an old process so scaled."* 531 F.2d at 1053, 189 USPQ at 148.)

With regards to claim 15: Braud teaches the buoy below the depth affected by waves, and preferably at "far below" the sea level. It would have been obvious to one of ordinary skill in the art at the time of the invention to have placed the buoy at least about 50 feet as called for in claim 15, in order to eliminate the effect of waves.

Art Unit: 3673

With regards to claim 16 Braud teaches the buoy below the depth affected by waves, and preferably at "far below" the sea level. It would have been obvious to one of ordinary skill in the art at the time of the invention to have placed the buoy at least about 200 feet as called for in claim 16, in order to eliminate the effect of waves.

Braud also teaches an opening (near 13) as called for in claim 17.

Braud also teaches the coupling device (near 5) as called for in claim 19.

Westling teaches weighting material in the tank as called for in claim 20.

Westling teaches weighting material comprising "sea bottom material" which comprises sand as called for in claim 21.

Westling teaches sufficient weighting material in the tank as called for in claim 22.

Regarding claims 24-26; Westling fails to teach the claimed dimensions. The various capacities and dimensions claimed in claims 24-26 would have been obvious to one of ordinary skill in the art at the time of the invention. *See In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955) (Claims directed to a lumber package "of appreciable size and weight requiring handling by a lift truck" where held unpatentable over prior art lumber packages which could be lifted by hand because limitations relating to the size of the package were not sufficient to patentably distinguish over the prior art.); *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976) ("mere scaling up of a prior art process capable of being scaled up, if such were the case, would not establish patentability in a claim to an old process so scaled." 531 F.2d at 1053, 189 USPQ at 148.).

3. Claims 7-11 and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Manning (U.S. Patent number 3,479,673) in view of Braud (U.S. Patent number 5,816,183); Westling (U.S. Patent number 3,855,809); and Panicker, et al. (U.S. Patent number 4,182,584).

Manning shows an oil storage and offtake system including a storage tank (12) attachable to the seabed and adapted to store hydrocarbons; a tensioned riser (10) coupled to a subsurface buoy. Manning fails to show the flexible hose coupled to the riser at a first end and the second end coupled to a surface buoy; fails to show the hawser, weighing material and also fails to show the fluid channel.

Braud teaches a mooring and offtake system including a buoy below the surface and a hawser with a first end below the water surface and also shows a coupling device (near 5). The Braud buoy and hawser is advantageous because it reduces the effect of weather on the mooring system.

Westling teaches a seabed oil storage tank which includes a fluid channel, for equalizing pressure as oil is introduced or removed from the tank, and which includes weighing material. The fluid channel is generally necessary for a rigid tank, and the weighing material keeps it on the bottom.

Panicker teaches a surface buoy (21) attached to a flexible hose, in order it to be accessed from the surface.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the Manning system to have a below surface mooring and offtake system (replacing everything above the buoy 19 with everything above buoy 2 shown by Braud), including a hawser having an end connected at a location below the water surface and coupling device, in order to minimize the effect of weather on the mooring system.

It would have been further obvious to one of ordinary skill in the art at the time of the invention to have included a surface buoy as taught by Panicker, in order to allow the hose to be accessed from the surface.

It would have been further obvious to one of ordinary skill in the art at the time of the invention to have included a fluid channel with the tank and weighing material, as taught by Westling, and as called for in claim 27, for equalizing pressure as oil is introduced or removed from the tank.

Westling teaches weighting material comprising "sea bottom material" which comprises sand as called for in claim 28.

Regarding claims 29; Westling fails to teach the claimed dimensions. The various capacities and dimensions claimed in claims 29 would have been obvious to one of ordinary skill in the art at the time of the invention. *See In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955) (Claims directed to a lumber package "of appreciable size and weight requiring handling by a lift truck" where held unpatentable over prior art lumber packages which could be lifted by hand because limitations relating to the size of the package were not sufficient to patentably distinguish over the prior art.); *In re*

Art Unit: 3673

Rinehart, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976) ("mere scaling up of a prior art process capable of being scaled up, if such were the case, would not establish patentability in a claim to an old process so scaled." 531 F.2d at 1053, 189 USPQ at 148.).

Regarding claims 7-11:

The Manning, Braud, and Westline references fail to teach the surface buoy.

The surface buoy is shown by Panicker, in order to allow the hose to be accessed from the surface. It would have been further obvious to one of ordinary skill in the art at the time of the invention to have the flexible portion coupled to the surface buoyant device as called for in claim 7, in order to allow the hose to be accessed from the surface.

Regarding claim 8, it would have been further obvious to one of ordinary skill in the art at the time of the invention to have coupled the hawser to the surface buoyant device as called for in claim 8, in order to allow the hawser to be accessed from the surface.

Braud teaches the hawser coupled to the subsurface buoyant device as called for in claim 9.

Braud teaches the coupling device as called for in claim 10.

Braud teaches the hose as called for in claim 11.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Manning, Braud, and Westling as applied to claim 1 above, and further in view of Phelps (U.S. Patent number 3,645,415).

Westling fails to disclose the web framed steel construction. Web framed steel construction is known for use constructing tanks, because it is durable. It would have been obvious to one of ordinary skill in the art at the time of the invention to have made the tank form web framed steel as called for in claim 23, in order to make it durable; with regards to the limitation of "being stable for open water tow": Westling shows a cylindrical shape similar to applicant's; thus it would inherently be stable for open water tow.

Response to Arguments

4. Applicant's arguments filed 7/21/03 (regarding the Mas or FR 2186955 reference) have been fully considered but they are not persuasive. Attention is drawn to the translation of the FR document; specifically pages 5 and 6, which describe the mooring of the ship and the offloading. The hawser is clearly attachable to a tanker.
5. Applicant's further arguments have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Kreck whose telephone number is (703)308-2725. The examiner can normally be reached on M-F 5:30 am - 2:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Shackelford can be reached on (703)308-2978. The fax phone

Art Unit: 3673

number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)306-4177.



John Kreck
Examiner
Art Unit 3673

JJK